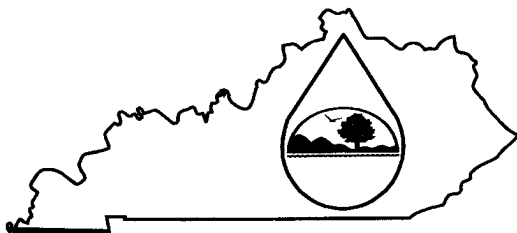


KPDES FORM SDAA

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Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Project Information

KY 6046447

Facility Name: Flag Ridge Surface Mine

Location: Two miles northeast of Harpes Creek intersection w/Ky Hwy 92

County: Whitley/Knox

Receiving Waters Impacted: Harpes Creek and Goldens Creek to Poplar Creek to Upper Cumberland River

II. Socioeconomic Demonstration

1. Define the boundaries of the affected community:

(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

The proposed project is located in Southeastern Kentucky on the border of Whitley and Knox Counties. The project is located about 15 miles east of Williamsburg, Kentucky and about 14 miles south of Barbourville, Kentucky. The nearest community is Siler, Kentucky. The proposed project will discharge water to Goldens Creek and Harpes Creek. Both of these streams discharge into Poplar Creek which ultimately discharges to the Upper Cumberland River at a location east of Williamsburg.

2. The effect on employment in the affected community:

(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

Whitley and Knox Counties are both predominantly rural counties with high un-employment rates. The current un-employment rates for Whitley and Knox counties are 11.7% and 11.8% respectively. Both of these rates exceed the overall state un-employment rate of 10.7% for Kentucky and 10.2% for the nation. About 26% of the people in these counties earn incomes that are below the nationally projected "poverty line". The development of this proposed project will add about 15 new jobs that will be directly affiliated with the coal company. An indeterminate amount of jobs will be "saved" or continued through the many vendors and support services that are affiliated with the mining operation (ie fuel sales, equipment sales, blast services, etc). The addition of these jobs in a poor rural county will positively affect the un-employment rate in this area.

II. Socioeconomic Demonstration- continued

3. The effect on median household income levels in the affected community:

(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

The current median household income for these counties is about \$20,000 per year. An average annual salary for jobs associated with this mining operation is about \$45,000 per year. The salary of one worker in this operation would lift the household income of the affected worker above the poverty level with only that income. In the affected counties about 26% of the households earn incomes that place them below the poverty level. The jobs generated by the coal company alone would affect 15 households and slightly increase the median household income for this region. The coal company proposing this project is head quartered in Williamsburg, Kentucky and the workers would all be local residents by virtue of the importance of access to the site and the time involved in getting to work. The affect of "saved" or continued jobs for affiliated vendors and support services would also positively affect the median house hold incomes of the region since such services are also located in proximity to this operation in the coal mining influenced area of Kentucky. At least an additional 25 households would be affected by these support service jobs and associated incomes.

4. The effect on tax revenues of the affected community:

(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

The most significant tax revenue increase in the affected community would be realized by the increase in coal severance tax that would be paid on the coal mined. Approximately 3.2 million tons of coal is projected to be mined on this site over an estimated 10 year period. Kentucky's coal severance tax rate is 4.5% of gross value. If the coal price is estimated at \$70 per ton, then \$10,080,000.00 of severance tax revenue would be generated from this site over that time frame. The bulk of these severance tax revenues are allocated by the state to the counties where coal is produced thereby providing a tremendous economic boost to this impoverished area. Additional tax revenues would be produced from the wages paid to workers on this site as well as sales tax revenue increases realized from fuel, supplies, etc. These increase tax revenues can be used by local officials to upgrade and maintain infrastructure facilities or other programs as they see fit to benefit the local community. The clear economic benefit of these funds also yields a social benefit to the community by a higher standard of living. There is little negative social or economic impact by the mining of this proposed site given its remote location. Furthermore, this site has been mined and abandoned many years ago and the site has existing highwalls and abandoned benches that have never been reclaimed and in some case pose a safety threat to the public as well as pose an environmental issue as it concerns drainage and sedimentation. These abandoned mine lands will be reclaimed without cost to the public and the end result will be the yield of reforested and regraded land that will approximate that topography that existed before any mining ever occurred.

II. Socioeconomic Demonstration- continued

5. The effect on an existing environmental or public health in affected community:

(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

This site has been previously mined during the pre-SMCRA period. As such, dangerous existing highwalls exist on the site as well as abandoned benches. This old abandoned site has no planned or designed drainage control as it currently exists. The proposed mining plans are formulated to reclaim existing highwalls, thereby eliminating a threat to the public safety. The proposed mining plans also are formulated to install a planned and designed drainage scheme that will minimize off site erosion and contributions of pollutants to the receiving streams. These contributions currently exist on the site and will continue in perpetuity if proper modifications are not made. The proposed mining plan offers clear environmental benefits to this abandoned area as well as offers the minimization or elimination of dangerous highwalls that currently exist on the site. All laws including SMCRA, Clean Water Act (section 401 and 404) that are pertinent to this site encourage the use of re-mining procedures to accomplish the goal as stated under this section. The proposed mining plan complies with all laws and is designed to accomplish the public safety and environmental enhancement goals.

6. Discuss any other economic or social benefit to the affected community:

(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

Mining and logging jobs in the region of Kentucky represent the best opportunity for employment at a substantial wage. Due to steep topography, agricultural endeavors are sparse and provide little opportunity for economic success in these counties of Southeastern Kentucky. Tourism and food service industry jobs are available at the population centers of Williamsburg and Barbourville, but these jobs tend to be "entry level" in nature and the pay scale is significantly less than wages provided by mining or logging related jobs. With economic downturn of the last 12-14 months, the Southeastern Kentucky region has been extraordinarily hard hit by un-employment and little opportunity exists today. The region is rich in natural resources and these jobs pay at a substantial and sustainable rate. The economic benefits of such jobs relate directly to the social component of life in this region. Government programs may provide temporary relief from un-employment impacts, but also pose a long term threat to the economic health of recipients. No reasonable person can expect for government programs to support themselves and their families forever or even for "very long". Jobs that develop natural resources which are readily available in the community also offer a long term commodity that is fast fading in our country, namely, HOPE!

III. Alternative Analysis

1. Pollution prevention measures:

(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

This proposed site currently exists as a previously mined and abandoned surface mine site. The site was mined prior to any surface mining regulations and therefore demonstrates several issues that relate to public safety and environmental impact. The proposed mining operation proposes to install a designed and regulated system of drainage control, air pollution control, public safety, and worker safety to recover valuable natural resources while reclaiming abandoned mine land at no cost to the public. The drainage system is designed to avoid flowing streams and waters of the state and US. A system of ponds and ditches will be utilized to minimize the discharge of suspended solids to receiving waters thereby providing remediation for a situation that clearly currently exists at the site. The cost of the drainage system is about \$10,000 to \$18,000 per pond and associated diversion ditch system. This is substantial but is provided and considered as part of production cost by the company. Clearly this would be an insurmountable cost to the public to provide similar beneficial facilities. Regrading will eliminate highwalls and restore the site to an approximation of the configuration that existed prior to any previous mining.

2. The use of best management practices to minimize impacts:

(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

The aforementioned drainage system will be constructed to control and minimize off site sedimentation as well as control peak discharges from large storm events of rainfall. Beyond the basic design and construction of the drainage system, the entire mining operation is planned to revegetate and reclaim disturbed areas as quickly as possible. This means that disturbed areas will be open for periods that generally will be less than 60 days before they are graded and seeded/mulched. This timely revegetation will work hand in hand with the drainage design facilities to not only retain sediment but to minimize the time that sediment is generated at the source. All water from disturbed areas will be diverted and directed to appropriate sediment ponds and other retention structures. Discharges from ponds will be regulated and monitored to insure compliance with SMCRA and the Clean Water Act. Discharge channels from the site, whether under road culverts or below sediment ponds, will be rock lined to conduct water to a stable natural drainway. This feature will further reduce erosion and sedimentation from this existing site which now generates a significant amount of solids to receiving streams.

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:

(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

This proposed site is a surface mining operation and is not a "process dependent" facility. This means that discharge from the site is entirely dependent upon seasonal rainfall. As such, there is little opportunity for recycling of surface runoff that is being detained in ponds. The lone exception to this would be that some water in easily accessible ponds will be used for dust suppression on spoil and coal haulage roads. The cost of such water pumping, hauling, and distribution is about \$1000 per day considering labor, equipment, and time. However, this process allows for providing safe working conditions in sight distance for travel, air quality for dust suppression, and overall worker safety and health. This cost is borne entirely by the company as a production cost of the resource.

III. Alternative Analysis - continued

4. Application of water conservation methods:

(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

This proposed site is a surface mining operation that does not propose to withdraw any water for process. The site is totally dependent on seasonal rainfall for discharge and all disturbed runoff will be detained in one of several sediment ponds associated with the site.

5 Alternative or enhanced treatment technology:

(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

This proposed project is a surface mining operation that is totally dependent on seasonal rainfall for runoff potential. Treatment associated with this site deals with primarily two main elements, (1) sedimentation and solids control in discharge and (2) peak storm flow for rainfall events.

Alternative 1: Allow no rainfall to affect the site.

Rationale: This is a large surface mining site (over 300 acres). Hence, there is no practicable way to separate the rainfall from interception the surface of the proposed site. Cost for this is unattainable.

Alternative 2: Build large ponds in the receiving streams to create impoundments and contain sediment

Rationale: Large impoundments in Harpes Creek and Goldens Creek would provide a suitable solution to retaining solids and minimizing peak flows from storm events. However, construction of such facilities would create dams and lakes in flowing streams in this area. This would represent a potential hazard to the public due to the large size of such facilities. Furthermore, the large impoundments would represent encroachments into "waters of the state of Ky" and "waters of the US". Per Clean Water Act considerations (particularly section 404) this option has not been chosen in order to minimize and avoid placing such facilities in "waters". Cost for this option would be less than option 3.

Alternative 3: Place small impoundments as close as practicable to the proposed disturbed areas in locations that are likely to be stable and discharge into stable natural channels.

Rationale: This option has been chosen for implementation given the nature of the site and the availability of the old existing bench to facilitate the construction of stable drainage facilities. Intermediate cost incurred.

6. Improved operation and maintenance of existing treatment systems:

(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

This proposed site is a large surface mining operation. No treatment system for drainage currently exists for this site that was mined during the pre-SMCRA time period. The treatment systems proposed in this operation is clearly a vast improvement to the overall environmental and drainage conditions that currently exist. 15 ponds are proposed for this site. Hence cost for construction of the drainage system alone would exceed \$225,000.00.

7. Seasonal or controlled discharge options:

(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

This proposed surface mining site is entirely dependent upon seasonal rainfall for discharge from detention structures. Due to the large size of the project, it is not possible to control discharges will pumps or other mechanical devices that would be of sufficient volume to retain all runoff and/or pump all runoff. The seasonal discharge system proposed for this site would take advantage of the assimilative capacity of receiving streams in that it is likely that large discharges from the site would occur during larger rainfall events when the stream also is carrying a larger capacity of flow. Likewise, it is probable that little or no flow would be realized from this site during the dry season or "baseflow" condition.

III. Alternative Analysis - continued

8 Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of proposed treatment system.)

This surface mining site deals with surface runoff from rainfall events. No injection well technology is feasible for handling this type of flow. No wastes are to be distributed or disposed of by "land application".

9 Discharge to other treatment systems

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

This proposed surface mine site is located in a rural and extremely remote setting. The discharge from this site is rainfall dependent and as such no feasible discharge arrangement with public or private conveyance facilities are possible. Furthermore, no such facilities exist for this purpose at this location.

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Signature:	<i>Danny Chambers</i>	Date:	11/18/09